

# CHAPTER 12

## Teacher Research and Action Research

**Research Question:** *What Methods Do Teachers Use to Research Their Own Practice?*

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**H**oward Banford had a question. Banford, a California teacher who used the writing workshop method in his second-grade classroom, wanted active participation by all of his students. Every student needed to take a turn in the author’s chair; everyone had to respond to other students’ writing. But Maricar—a shy Philippine American student—seemed silent, a loner. To better understand what was happening with Maricar in the writing workshop, Banford decided to conduct his own classroom-based research—to observe, record, and reflect on her participation in a systematic way. Banford’s research question was, “What can a close look at Maricar teach me about ‘improving writing workshop and student learning in general?’” (Banford, 1996, p. 5). One teacher, one classroom, one student, and a teacher’s need to answer a question—this is a starting point for **teacher research**.

What kinds of questions do teacher researchers ask? What methods do they use? Teachers' questions are wide-ranging, and their methods are many and varied, depending on the situation. Typical questions might be the following:

- What happens when chemistry is taught in heterogeneous groups?
- What happens when students choose their own spelling words?
- How do first graders learn number facts?
- What is teaching and learning from the student's perspective? (Lieberman, 1994, p. vii)

Over time, some teacher researchers take things to another level. Building on their initial questions and investigations, they develop what Marilyn Cochran-Smith and Susan L. Lytle (2001) call an “inquiry stance” toward their own work, a stance that is “critical and transformative” and linked not just to high standards for all students but to “social justice,” and “the individual and collective professional growth of teachers” (p. 46). Many teachers find an **inquiry stance** empowering because it “talks back to, and challenges, many of the assumptions that define teaching and research on teaching in the current era of acute educational accountability” (Cochran-Smith & Lytle, 2009, p. 44).

In this chapter, you will learn about the origins of teacher research and why it has become so popular. You will see multiple examples of teacher research and the methods that teacher researchers employ, and you will learn about several types of teacher research. You will also be given an outline for creating a teacher research project of your own. In the second part of the chapter, you will learn about **action research**, a cyclic, team-based method for creating school change that is closely related to teacher research. Finally, we will discuss issues of validity and ethics that arise when school-based practitioners conduct research in the classrooms and schools where they work.

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## 2 Teacher Research: Three Case Studies

### Case 1: Maricar

Howard Banford undertook his project as part of a teacher research initiative sponsored by the National Writing Project (NWP). He conducted his research during the school year supported by a local teacher researcher group. In the summers preceding and following the data collection year, he attended a national institute for teacher researchers sponsored by the NWP, where he received technical and resource support in planning the project, conducting data analysis, and writing up the project.

Because of previous experience with quiet students, Banford began his project with the belief that the writing workshop worked for them, too. But he also realized that he had little understanding of *how* the writing workshop worked for these students, as opposed to louder, more gregarious students whose involvement was much easier to see. Banford (1996, p. 5) studied Maricar's participation in the writing workshop for an entire school year. He collected her writing from writing workshop sessions, audiotaped her writing response group, conducted several interviews with her, and kept his own teacher's journal in which he regularly wrote about what he was seeing in class and on the playground.

What he found was a style of participation and growth he had not anticipated. Central to Maricar's growth was a supportive family. Her kindergarten and first-grade teachers remembered her as a slow worker and unsure student. Both of her parents worked, and she and her 5-year-old sister were cared for by their grandmother, who spoke to them only in Tagalog, the native language of the Philippines. Her family placed a strong value on education, and Maricar had high aspirations for herself (Banford, 1996).

Maricar began the year as one of the slowest writers Banford (1996) had ever taught. Her stories were also short, and the classroom "buzz" during writing time bothered her concentration. But she was quietly persistent in her writing, and she was a keen listener, both to Banford's mini-lessons and to other student's stories. Once she learned the rules of the workshop format, she excelled at responding to the writing of others. By February, her stories had lengthened considerably. As the year went on, she overcame her fear of the author's chair, and she used the response groups to build social bridges to other girls in the class.

In summing up his findings, Banford (1996) concluded that the writing workshop succeeded for Maricar because it was "ordered, structured, and predictable" (p. 21) and so gave her a way to work at her own pace and to interact with other students in a safe environment. Initially thinking of Maricar as an immature writer, Banford (1996) found that studying her closely changed his views and that at the end of the project, he saw her as an above-average writer who took risks with topics and spelling, had "an extraordinary ability to stick with stories over a long period of time," and was "unusually responsive to both mini-lessons and her peers" (p. 23). His close, year-long study of one quiet student changed his view of what successful writers do and caused him to think more deeply about the "quiet side" of his classroom.

### Teacher Researchers as Knowledge Makers

When he finished this project, Banford (1996) knew many things about Maricar and his teaching that he didn't know before. He knew, most of all, that the writing workshop worked for Maricar, and he knew some of the reasons *why* it worked for her: It provided "a safe haven for a shy student" (p. 20), it allowed her to work at her own pace, and it drew on one of her strongest assets as a learner—her ability to listen (p. 21). He didn't guess these things, or feel them, or believe them without evidence—he *knew* them. It is this "knowledge dimension" that teacher researchers often cite as its most powerful, transformative benefit.

Traditionally, university researchers have been seen as the knowledge makers, the "knowers," in education. Teachers (and administrators) were considered the "doers" (Check, 1997). For decades, the dominant shape of education research was this: The knowers studied the doers, and their conclusions and recommendations were used by policy makers to attempt to improve schools. One frequent criticism of this approach was that it created a gulf between theory and practice. University libraries were filled with educational research studies that few practitioners ever read.

Over the past 20 years or so, teacher research has become increasingly popular because it bridges the gulf between theory and practice, between research and implementation. It has been called "a radical departure from the traditional view of educational research as a specialist activity, the results of which teachers apply rather than create" (Elliott, 1981, p. 1). By providing an alternative to the traditional relationship of research to practice (university faculty = knowers, teachers = doers), it changes the power relationships between practitioners and researchers.

### Roots of Teacher Research

Today's teacher research movement has a long intellectual heritage. John Dewey (1933) envisioned teachers as reflective professionals who build theory from practice. In the late 1950s, British researcher Lawrence Stenhouse, a teacher educator, argued that teachers were "highly competent professionals who should be in

charge of their own practice” (Stenhouse, 1975, p. 144). He maintained that professional education meant that teachers were committed to systematic questioning of their own practice as a basis for development and to testing theory in practice (McNiff & Whitehead, 2006, p. 37).

In the 1980s, Donald Schon (1983), a professor of urban studies and education at MIT, investigated what he called “reflection-in-action” (p. viii), also called **reflective practice**, in the work of various professions, including teaching. Schon asked, “What is the kind of knowing in which competent practitioners engage? How is professional knowing like and unlike the kinds of knowledge presented in academic textbooks, scientific papers, and learned journals?” (p. viii). Schon pointed out that for professionals such as architects, lawyers, and teachers, real-world problems do not arise as “well-formed structures” but as

messy, indeterminate situations. . . . A teacher of arithmetic, listening to a child’s question, becomes aware of a kind of confusion and, at the same time, a kind of intuitive understanding, for which she has no readily available response. . . . The case is not “in the book.” If she is to deal with it competently, she must do so by a kind of improvisation, inventing and testing in the situation strategies of her own devising. (Schon, 1987, pp. 4–5)

Conceptually, it is a very short step from a reflective practice that identifies a problem, then devises and tests solution strategies, to teacher research.

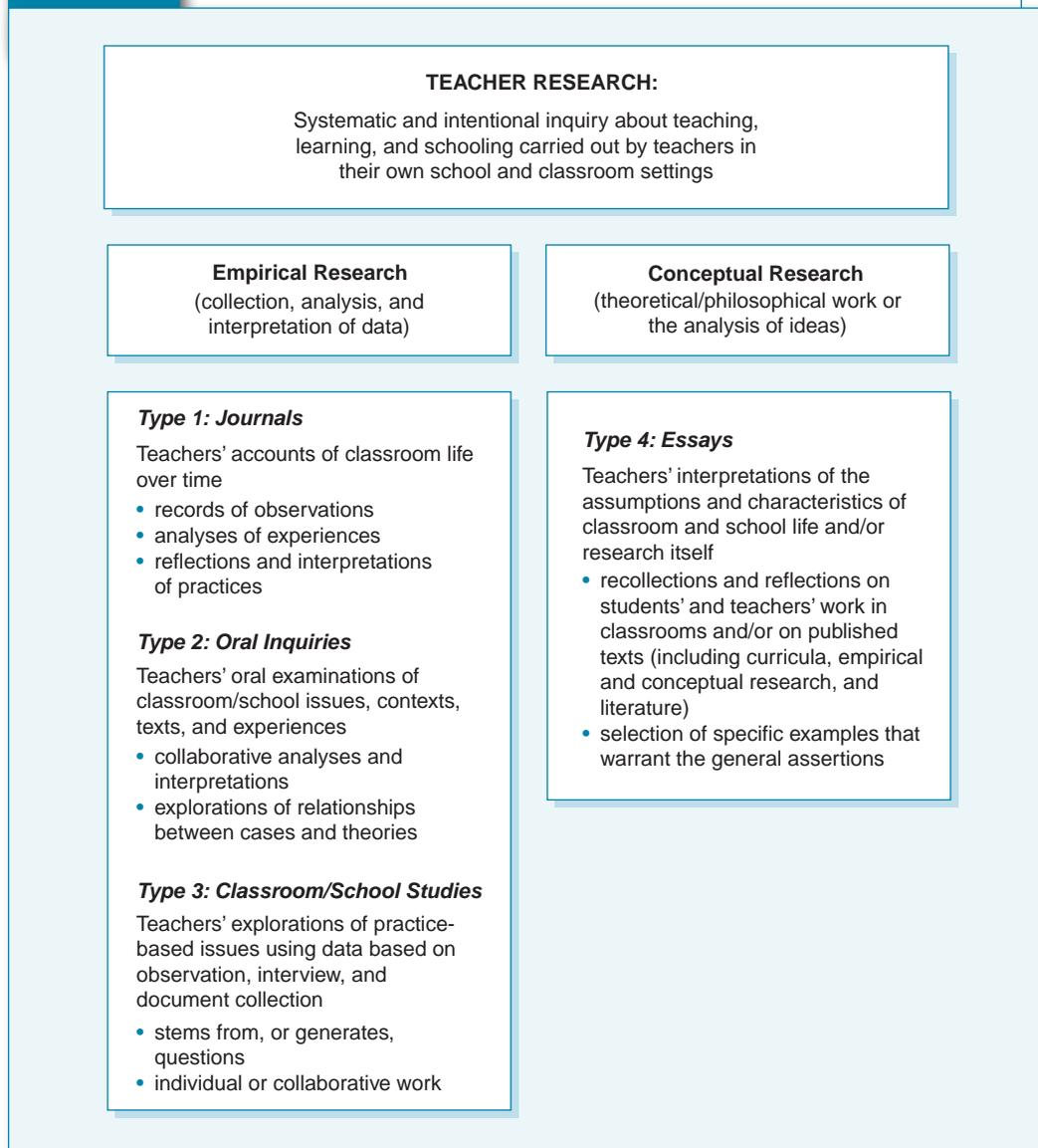
### Types of Teacher Research

How does a teacher researcher go about “inventing and testing in the situation strategies of her own devising?” More generally, how do teachers construct useful knowledge about teaching and learning by systematically studying their own practice? In the Banford (1996) case, you have seen concrete examples of the kinds of questions asked and research techniques used by one teacher researcher. Exhibit 12.1 shows a more general analytic framework for teacher research forms proposed by Marilyn Cochran-Smith and Susan Lytle (1993). They identify two categories of teacher research, one empirical—involving data collection and interpretation, the other conceptual—involving “analysis of ideas” (p. 27). As Exhibit 12.1 makes clear, in the empirical category, they locate “Journals (teachers’ accounts of classroom life over time),” “Oral Examinations (Teachers’ oral examinations of classroom/school issues, contexts, texts, and experiences),” and “Classroom/School Studies (Teachers’ explorations of practice-based issues using data based on observation, interview, and document collection).” In the conceptual category, they place “Essays” (Teachers’ interpretations of the assumptions and characteristics of classroom and school life and/or research itself.)” (p. 27).

Our second case study demonstrates how Joseph Kelly, an elementary school teacher, used a number of the methods identified by Cochran-Smith and Lytle (1993) to become not just a “doer” but a “knower” in relation to his own teaching.

### Case 2: Self-Reflection in a Science Class

Joseph Kelly, a fifth-grade science teacher, designed a teacher research project to help him understand how the use of portfolios in his classroom affected students’ science learning. He framed the question, “What happens when students use self-reflection in science as a means of assessing growth?” (Hubbard & Power, 1999, p. 73).

**Exhibit 12.1 Analytic Framework for Teacher Research**

Source: Cochran-Smith and Lytle (1993, p. 27).

His data collection methods and calendar for the project looked like this (Hubbard & Power, 1999, pp. 73–74):

*August*

Letter to parents  
Develop survey questions  
Start teacher journal

*September–January*

- Notetaking
- Keep teacher journal
- Student folders
- Model self-reflection
- Survey records kept in teacher log
- Review student responses weekly
- Make and review one student videotape weekly
- Talk with co-teacher to share information
- Parent partner to make observations and meet weekly to discuss and see if there are any connections at home
- Look for patterns

*February–April*

- Analyze student growth in portfolios
- Continue all of the above

*June*

- Draw conclusions from portfolios
- Complete final survey
- Review entry and exit survey/compare differences
- Summary statement

As you can see, in this ambitious, year-long project, Kelly’s research methods and instruments included a letter to parents, an entry/exit survey, his own reflective journal, note taking on classes, portfolios of student work, teaching his students how to write reflections and analyzing them, periodic videotapes, conversations with his co-teacher, and meetings with “parent partners” to assess the connection between home and school.

His data collection methods included both classroom activities that would have happened in any case (portfolios of student work) and activities undertaken specifically for the research project (his reflective journal, videotapes). His activities as a researcher did not conflict with or supplant his teaching role—they complemented it. Becoming a knower as well as a doer served as self-initiated professional development that improved his teaching practice.

Our third case study briefly describes a large, long-term teacher research initiative conducted by a school district in collaboration with a local university.

### **Case 3: A District-Wide Teacher Research Program**

Cathy Caro-Bruce, Mary Klehr, Ken Zeichner, and Ana Maria Sierra-Piedrahita (2009) reported on a district-sponsored teacher research program in Madison, Wisconsin. From small beginnings in 1990, the program grew until it became available to all teachers in the Madison Metropolitan School District (MMSD), which in 2009 served 25,000 students in 47 schools K–12. The program, which has between 30 and 100 participants each year, involves a partnership with the school of education at the University of Wisconsin–Madison (Caro-Bruce et al., 2009, pp. 104–105).

Reflective practice is at the heart of the program. Essential to the program’s success are a set of core principles that include voluntary participation, teachers being treated as knowledgeable professionals who control their own research questions and methods, research groups of 6 to 10 members who meet in

a supportive environment, and the use of facilitators to provide a framework for the research process and technical assistance (Caro-Bruce et al., 2009, pp. 108–110).

With the aid of a facilitator, teachers focus on an area of their own pedagogy that they wish to investigate, then go through a process of refinement to develop a research question. With the aid of facilitators and fellow group members, they learn about a range of inquiry methods but ultimately have autonomy in choosing strategies that they think best fit their context. A key element is the use of triangulation—the use of multiple research methods and perspectives for data collection and analysis (you will see more about triangulation a little later in this chapter). When the project is completed, they write final reports that are shared with others and posted on the district’s website (Caro-Bruce et al., 2009, pp. 108–112).

In research studies on the effects of the program, “many of the teachers . . . felt a greater sense of control over their work . . . they now looked at their teaching in a more analytic, focused manner, a habit they claimed to have internalized and applied beyond the research experience” (Caro-Bruce et al., 2009, p. 113).

## 2 Teacher Research: A Self-Planning Outline for Creating Your Own Project

Many states now require or recommend that teacher preparation candidates take a course in teacher research as part of their initial or advanced training. Here is a general outline for a classroom-based teacher research project, developed by one of the authors for such a course at the graduate level. If you find yourself embarking on a teacher research project of your own, this outline can help you think through the steps needed to organize your efforts. This particular outline was for a one-semester course, but it can work just as well for a year-long project, with more time devoted to data collection and analysis. Although it can be used as a self-tutorial, it works best when you have another person—a mentor, a colleague, a friend, a professor—read what you’ve written and give you feedback at each stage, before going on to the next. Suggested length guidelines are given, but they are suggestions only. You should determine how much you want to do in each area and how long you wish to spend on it.

### Self-Planning Outline

#### 1. *Personal/School/Teaching Context (3–5 pp.)*

Begin by thinking, and writing reflectively in a journal, about yourself and your teaching context—the demographics of your school system/school/classroom; your colleagues and administration; your own background, training, and interests; and how you got to where you are right now as a teacher.

To accompany this reflection, make a diagram or map of your classroom indicating the location of your desk, where you sit/stand/move as you teach, student desks, what’s on the walls, what floor your room is on, location of doors and windows, some idea of the dimensions of the room, what media are available or present (computers, TV, etc.), and any other items you think are pertinent (story area or rug, author’s chair, time-out area, etc.). This will be the context and setting for your research.

*(Continued)*

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### 2. *Research Purpose (1–2 pp.)*

Try to state as well as you can why you are undertaking a research project. Ask yourself: Why do I want to do this? What am I hoping to accomplish? What do I expect to learn through the project that I did not know before?

### 3. *Research Question (1 p.)*

What is your research question, and why is it important to you? Although it may be difficult to do so, you have to articulate your question at this point as clearly as you can. Your question will probably be broad and tentative at first but will be modified as you go along. Many teacher researchers find that their research question changes or transforms for weeks or even months before it achieves a final form. Do not let this bother you—it's a normal part of the process. Right now you just need a question that will help you get the project started. Use the case studies and conceptual diagrams from this chapter to give you ideas, and follow up by looking at some of the items on the resource list.

### 4. *Literature Review (3–5 pp.)*

You are probably aware that scholarly articles in education journals typically begin with an extensive review of the literature. You may not be aiming for publication in a scholarly journal, but you do need to familiarize yourself to a certain extent with what others have done in the area of your research question. You need to get some sense of the state of knowledge in the field and how previous work by others can help you shape your own inquiry.

A realistic goal is to identify three to five sources—books, journal articles, research reports—published within the past 5 years that deal with your subject in a way that makes sense to you. You should briefly summarize these and give a brief statement of what you have learned from them. These may include sources you have already read and are familiar with, or you may need to do a literature search.

### 5. *Data Collection and Data Analysis (Includes Timeline) (3–6 pp.)*

Describe how you plan to go about answering your question. What data will you gather? From whom will you gather data? When and in what sequence? Will you use interviews, a survey, classroom observation, a journal, etc.? How will your inquiry unfold in time?

The cases and exhibits in this chapter can give you a sense of the wide variety of research methods available to you. Other chapters in this book contain information on many of them. You will also need to consider ethical questions such as privacy and confidentiality, gathering data from minors, and potential harm to human subjects. Triangulation and reflexivity, which are described in detail a little later in this chapter, will be important considerations here.

### 6. *Reflections/Conclusions/Recommendations (2–5 pp.)*

You should plan, when your project is complete, to write a reflective report or essay about how you conducted your research and what you learned from it. You will need to ask yourself questions such as the following: What seemed significant about the data I collected and about the process? What conclusions, if any, did I reach about my own teaching, and what might be changed or improved? What did I learn about my students and my school? Do I plan to change anything as a result of this inquiry? Who else would be interested in hearing about what I've learned? How can I publicly share what I've done?

#### *Resources for Teacher Researchers*

The outline above is a skeleton that will help you get started. To help you go into greater depth, collections of teacher research and how-to manuals are readily available, with more being published every year. Here are several titles that many teachers have found particularly accessible and useful:

Banford, H., Berkman, M., Chin, C., Cziko, C., Fecho, B., Jumpp, D., et al. (1996). *Cityscapes: Eight views from the urban classroom*. Berkeley, CA: National Writing Project.

Cochran-Smith, M., & Lytle, S. L. (1993). *Inside/outside: Teacher research and knowledge*. New York: Teachers College Press.

Cochran-Smith, M., & Lytle, S. L. (2009). *Inquiry as stance: Practitioner research for the next generation*. New York: Teachers College Press.

Hubbard, R. S., & Power, B. M. (1999). *Living the questions: A guide for teacher researchers*. Portland, ME: Stenhouse.

Mohr, M., Rogers, C., Sanford, B., Nocerino, M., MacLean, M. S., & Clawson, S. (2004). *Teacher research for better schools*. New York: Teachers College Press/National Writing Project.

Teel, K. M., & Obidah, J. E. (Eds.). (2008). *Building racial and cultural competence in the classroom: Strategies from urban educators*. New York: Teachers College Press.

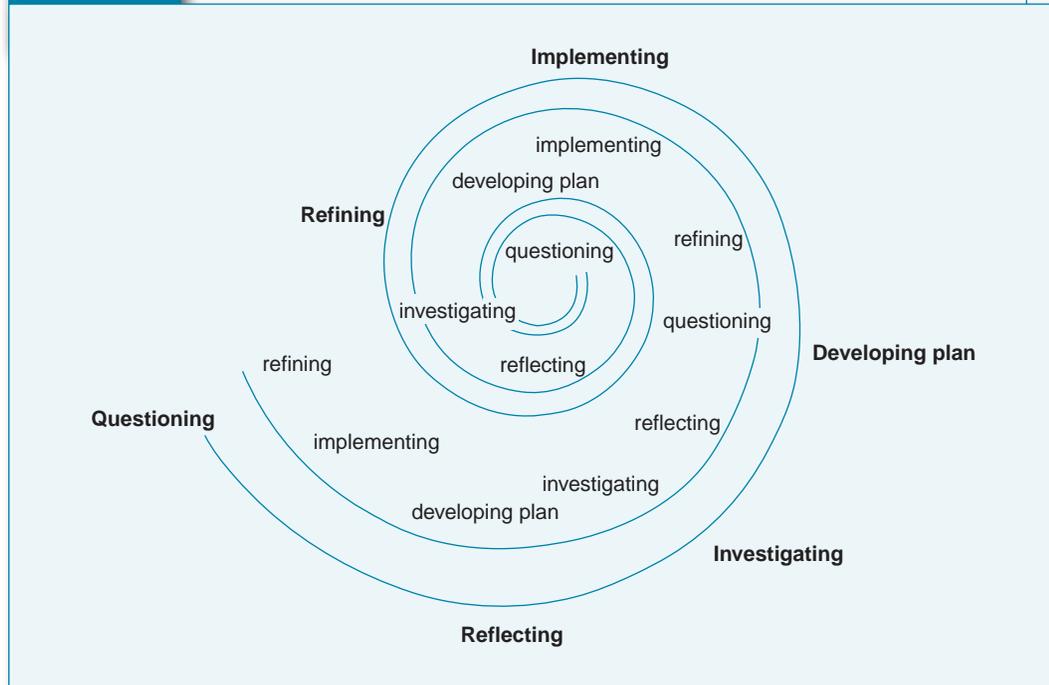
We will now turn to action research, also called **participatory action research**, another increasingly popular practitioner research method.

## 2 Action Research and How It Differs From Teacher Research

Action research emerged in the 1940s from the work of anthropologist John Collier and social psychologist Kurt Lewin. Collier (1945) and Lewin (1946) were both interested, in different ways, in the intersection of social justice, research methods, and organizational change. Lewin outlined an approach to research that used successive cycles of planning, action, and fact finding about the result of the action. This circular or, more accurately, spiral process has become an essential, defining element of action research. Exhibit 12.2 shows a recent example of such a circle from Alice McIntyre's (2008, p. 6) work, showing action research as a **recursive process**—a process that loops back on itself—and “involves a spiral of adaptable steps” that include questioning a particular issue, reflecting upon and investigating the issue, developing an action plan, and implementing and progressively refining the plan.

Action research is now used in many countries and in fields such as public health, sociology, psychology, and some business settings. Its use in education is rapidly growing, both in the United States and internationally. Many educators and community workers find it to be highly compatible with the emancipatory theory and methods of the iconic Brazilian educator Paulo Friere (Friere, 1970, 1985; McIntyre, 2008, p. 3; Minkler, 2000).

Confusion can be caused by the fact that in education, the terms *action research*, *teacher research*, and *practitioner inquiry* (or *practitioner research*) are often used almost interchangeably. One recent how-to book, for example, carries the title *Action Research: Teachers as Researchers in the Classroom* (Mertler, 2009). Nolen and Vander Putten (2007) use *action research* to refer to “the entire body of research in which the practitioner is engaged in collecting data or information for the purpose of solving a practical problem in an authentic setting” (p. 406).

**Exhibit 12.2** The Recursive Process of Participatory Action Research

Source: McIntyre (2008, p. 7).

Strictly speaking, though, there are important differences between *action research* and *teacher research*. *Teacher research* is commonly used to describe all kinds of school- and classroom-based research conducted by practitioners. It has been defined as “inquiry that is *intentional, systematic, public, voluntary, ethical, and contextual*” (M. Mohr et al., 1994, p. 23). *Teacher research* as a general term embraces many methodologies and many situations.

In contrast, *action research* in its strict sense refers to research activities that use a cyclical, **action reflection model** to investigate and attempt to make change in an organization, for example, a whole school. The term *participatory action research* emphasizes, within this action reflection cycle, the involvement of those who, in other research methods, would be called research “subjects.” In participatory action research, they are seen as co-researchers, participants in the conceptualization, implementation, and interpretation of the research project as it unfolds.

To simplify, all action research conducted by practitioners can properly be termed *teacher research*, but not all teacher research can properly be labeled *action research*. Here are three ways in which *teacher research* can differ from *action research*:

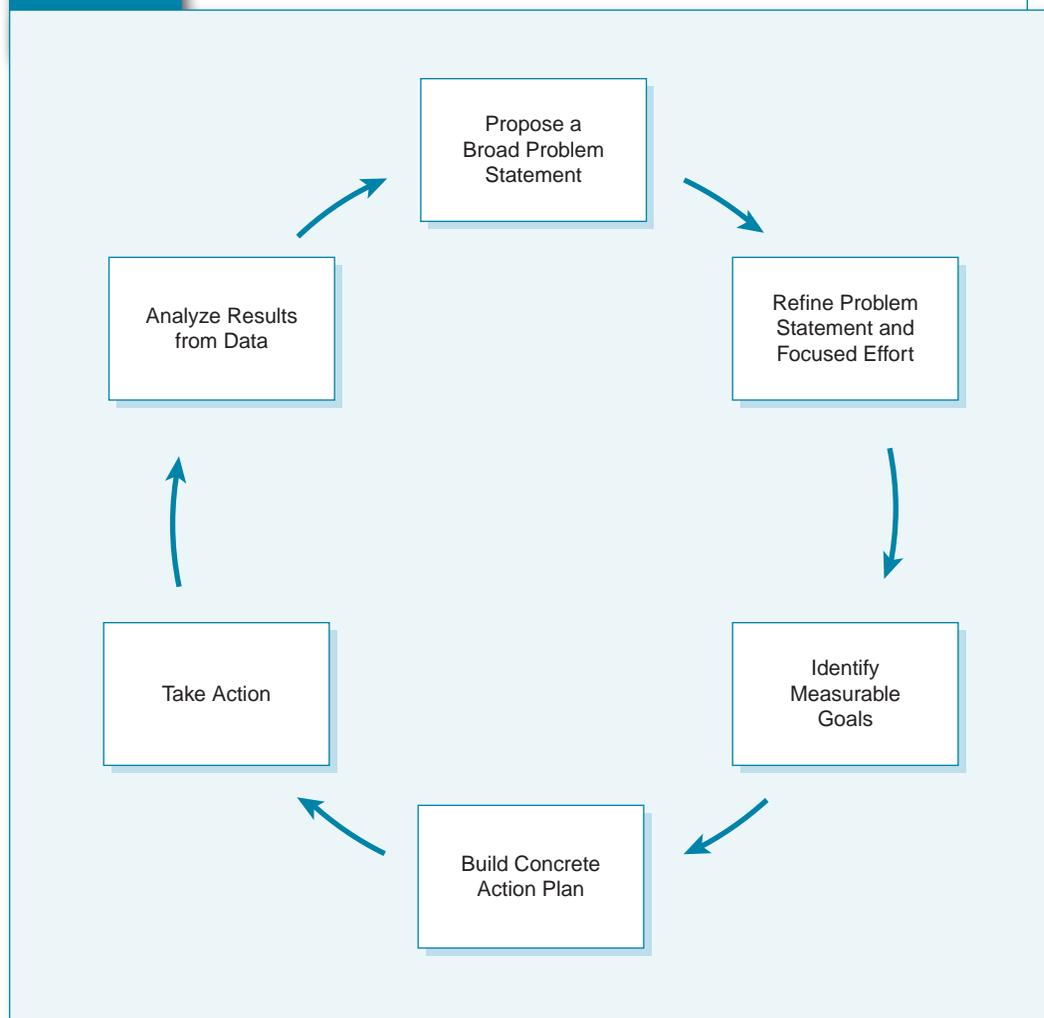
1. Teacher research is not necessarily cyclic in nature.
2. Teacher research allows for but does not necessarily require a team element—one teacher can conduct practitioner inquiry in his or her own classroom, for his or her own benefit.
3. Teacher research does not necessarily require a specific action or improvement as an outcome—it can produce a change in a teacher’s perceptions, attitudes, or thinking that will eventually result in particular changes, but the immediate result of a practitioner inquiry project need not be a set of specific actions.

## Using Action Research to Promote Whole-School Change

In educational action research, the school (rather than one student or classroom) is the organizational unit that is most often the target of the research. McLaughlin (2001) studied a 5-year school change initiative involving schools in 118 districts throughout California's Bay Area (San Francisco's metropolitan area). The initiative sought "to 'reculture' schools," to "change the way schools do business," replacing the existing school culture with one built on "evidence-based decision-making centered on a focused reform effort" (p. 79).

To accomplish this goal, the program used a modified action research model, "a school-based cycle of inquiry" that supported teams of teachers in each school as they pursued "learning and change" (p. 79). Exhibit 12.3 shows a diagram of the inquiry cycle used in the project. Notice the similarity to McIntyre's (2008) model (Exhibit 12.2), with the emphasis on stages in a cyclic process.

**Exhibit 12.3** The Cycle of Inquiry



Source: Adapted from McLaughlin (2001, p. 80).

## Case 4: Identity and Power in an Action Research Project

Sharon M. Ravitch, a university researcher, and Kathleen Wirth, a Philadelphia elementary school teacher, collaborated on an action research study (Ravitch & Worth, 2007) that illustrates many facets of the way action research is currently being used in education. Wirth, an experienced teacher and literacy leader, used both qualitative and quantitative methods to study a professional development program that she was conducting in her own school.

Wirth was particularly concerned that change efforts incorporate the perspectives of colleagues and not just become an attempt to impose her own or the district's pedagogical beliefs on them. At the same time, Wirth was taking a graduate research course with Ravitch, who acted as an outside voice and observer to Wirth's process. The result was (1) an extensive school-wide, change-oriented professional development program; (2) an ongoing, process-oriented study of that program conducted by Wirth; and (3) a meta-level look at the whole process conducted by Ravitch.

Wirth's greatest challenge, and one that confronts many teacher researchers involved in school change, was developing "a balance between being a colleague, school leader, friend, and researcher" (Ravitch & Worth, 2007, p. 78). She began by gathering information from teachers through a questionnaire and interviews and factored the results into her research design. Her project aimed for organizational change, and she found at first that many teachers were comfortable with the way things were, afraid of change, and uninterested in doing additional work (p. 79). Wirth soon realized that she was attempting to work collaboratively with fellow teachers in an existing school climate that supported a philosophy of "just close your door and teach" at the expense of collaboration and mutual support (p. 79). Overall, teacher resistance was a "major issue" (p. 79). Wirth had to begin by gaining the trust of her colleagues and incorporating their ideas into the research design. She incorporated a number of reflective steps to increase validity and build ownership among participants, including field notes, memos, "varied and overlapping data collection and analysis strategies so that triangulation was a central component," and "keeping collaboration and research logs that specifically related to my interaction with participants" (p. 86). Ultimately, Wirth had to share her power as a leader and researcher and become more of a facilitator and integrator of group ideas. Although this was not what she had originally envisioned, her research opened up opportunities for an active exchange of ideas, especially in "difficult and historically taboo topics like race, racism, social class, and equity" (p. 87).

As Wirth's case illustrates, both teacher researchers and action researchers explore their own settings, where they play multiple roles, so questions of validity require special consideration. In the next section, we will consider some of these questions.

## 2 Validity and Ethical Issues in Teacher Research and Action Research

### Validity

As you have seen in the examples above, two important aspects of validity in teacher research are **triangulation** and reflexivity. Triangulation requires the use of multiple data sources. Reflexivity involves conscious, critical self-awareness by individuals and teams about their own preconceptions, biases, and assumptions both before the research begins and as it unfolds.

## Multiple Data Sources

The use of multiple data sources is an important guarantor of validity in teacher research. Ferrance (2000, p. 17) suggests that school-based researchers consider a wide range of sources, including interviews, student portfolios, field notes, photographs, journals, audio and video recordings, test results, report cards, attendance records, and samples of student work and projects. Notice that Banford (1996), Kelly (Hubbard & Power, 1999), and Wirth (Ravitch & Wirth, 2007) all used multiple sources of data similar to those listed and also engaged in ongoing, written reflection before, during, and after data collection.

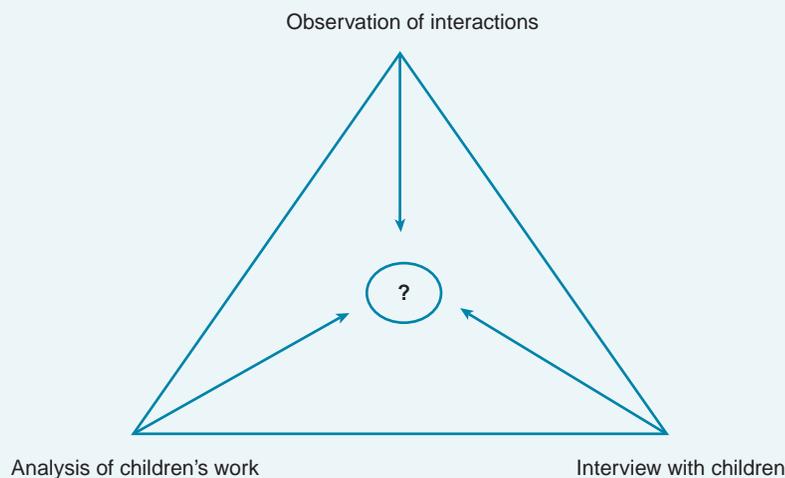
The important thing to understand is that no one data source can give you a whole and accurate picture of what is happening. Teacher researchers need multiple perspectives, represented by a range of data collection techniques, to illustrate different aspects of the same question or problem. As you have seen, this principle is called triangulation, usually implying that at least three sources or data collection techniques are brought to bear on the research question (Waters-Adams, 2006). In the Banford (1996), Kelly (Hubbard & Power, 1999), and Wirth (Ravitch & Worth, 2007) examples, more than three were used. Exhibit 12.4 shows an example of triangulation from a teacher research project in an elementary-grade science class.

In reference to Exhibit 12.4, Waters-Adams (2006) says,

In this case, [the question mark in the middle of the triangle in Exhibit 12.4] might be children's engagement during science sessions. Each method will give access to different aspects of the situation. There will still be areas not illuminated, but more is known than if only one method is used. Also, cross-referencing of data from different methods adds to the overall reliability of the research process. (<http://www.edu.plymouth.ac.uk/RESINED/actionresearch/arhome.htm>)

### Exhibit 12.4

#### Triangulation in an Elementary-Grade Science Action Research Project



Source: Waters-Adams (2006). Copyright © Dr. Steve Waters-Adams. Reprinted by permission of the author.

## Reflexivity

A reflexive element, almost always expressed in written form, is an essential part of teacher research, including action research. Why? Teacher researchers are themselves actors in the context they explore. Action research is often done in teams where each member brings a different perspective. The success or failure of the interventions attempted must be evaluated by the researchers themselves. All of these elements contain potential threats to validity.

Teacher researchers use a number of techniques to try to gain separation from context and reflective clarity on their own perceptions and actions. In Case 2 above, Kelly (Hubbard & Power, 1999) kept a reflective journal throughout the project, talked with his teaching partner and parents to gain additional perspective, and even modeled self-reflection for his students. In Case 4, Wirth (Ravitch & Wirth, 2007) reported that “ongoing analysis of . . . field notes, research journals, memos, and collaborative logs helped me to address issues of validity in a structured way” (p. 86). In team research settings such as the one described in Case 3 (Caro-Bruce et al., 2009) in Madison, Wisconsin, reflective efforts by individuals are often complemented by group critical reflection and discussion to get over rough spots and to come to consensus on outcomes.

## Ethical Considerations in Teacher Research

Teacher researchers must follow the same ethical practices as other educational researchers. As insiders, teacher researchers are typically part of the school setting and in charge of the classroom they are researching. This means that the entry process, an initial hurdle for outside researchers, will be fairly easy for the teacher researcher. However, there are other ethical pitfalls to be wary of. Their research subjects will probably be minors, so gaining informed consent will be a two-stage process involving both a consent form from the parent or guardian and an assent form from the student. This is required to collect, for example, student interviews and work samples for research purposes. Because teacher researchers have access to students’ grades and other school records, they must be especially vigilant about confidentiality. Because they are in control of the classroom, they must guard against abuse of power relationships. If the project is funded through a college, university, or agency, the project proposal may need to go before an institutional review board for approval.

Research participants, whether students or colleagues, must be treated with fairness and respect. Both negative and positive data must be acknowledged and reported, and school and district policies that affect the research must be followed (M. Mohr et al., 2004, p. 144). While the project is under way, participants must be protected by rigorously maintaining anonymity and confidentiality in the data collection and analysis process but also by shielding them from controversy or negative fallout from the unfolding of the project itself. Wirth (Ravitch & Wirth, 2007) refers to such issues when she describes teachers’ fears that she was “an instrument of the district,” which produced a pronounced lack of trust, and her coming to understand the need to share power and authority if the project was to be successful. Finally, if you have ethical questions concerning your research or that of a colleague, seek dialogue, expert help, and resources to help you address the situation.

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## 2 Conclusions

We began this chapter by posing the question, “What methods do teachers use to research their own practice?” We have seen multiple answers to this question in the case studies. Banford (1996, p. 5) collected samples of Maricar’s writing over the school year, audiotaped her writing response group, interviewed her, and kept his

own teacher's journal. Kelly (Hubbard & Power, 1999) used a wide area of methods that included a teacher's journal, a classroom survey, and portfolios of student work. Caro-Bruce et al. (2009) reported on a district-wide teacher research program in which school-based groups assisted by outside facilitators developed a question, then learned about and considered a range of methods before deciding which ones were appropriate to their situation. Wirth (Ravitch & Worth, 2007) used an action research model to promote school change and had a university collaborator (Ravitch) who was closely involved. Because reflexivity plays such a large role in action research, Wirth collected data not just on the school and on teacher attitudes and practices but also on herself and her changing attitudes in the face of identity and power issues that arose during the research.

Teacher research, including action research, represents an exciting, fast-growing, and relatively new approach to educational inquiry. Teacher research helps to address some of the traditional failings of educational research in that it is change oriented, its results are immediately applicable, and it positions practitioners as knowledge creators as well as knowledge users. Teacher research also has limitations—reporting of results is usually confined to the local community, and many research questions are not possible to undertake within the parameters of teacher research.

Teacher researchers position themselves as epistemologically unique, in that as practitioners they have access to a type of knowledge that is grounded in a combination of practice and reflection. Teacher researchers identify the problem to be investigated, formulate the research question(s) to be asked, decide on the methods used to investigate those questions, gather the data, and interpret the results. They use a variety of methods, both qualitative and quantitative, to ensure triangulation, and reflection is central to their work. They abide by the same ethical codes and face the same ethical challenges as other researchers. They share their work publicly, although the sharing may be in a local context only. Because teacher researchers are located “on the ground,” in the classrooms and schools where education actually takes place, they minimize the gulf between theory and practice.

Because they are teachers and not professional researchers, teacher researchers often seek resource help throughout the research process, typically from a university faculty member or other outside researcher. The context for many teacher research projects is a funded project (Banford's case), a graduate course (Wirth's case), or a district- or school-wide initiative (Madison, Wisconsin) that provides this support. Typically, such help is sought at critical stages of the project such as the literature review, deciding what methods are realistic to use, and interpretation of the data.

Paradoxically, the growth of teacher research has been both challenged and reinforced by accountability-based federal and state mandates (No Child Left Behind, state-level education reforms). Investigating their own practice, teacher researchers build a knowledge base that is independent of sweeping curricular mandates and narrow testing-based measurements of student achievement. At the same time, governmental reforms call for the use of “research-proven” methods in curriculum and instruction and “data-driven decision making” at the school level. Teachers and administrators with experience as school-based researchers are in an excellent position to respond to these mandates, both as evaluators of outside research and initiators of their own investigations, even if they disagree with them.

Cochran-Smith and Lytle (2009) assert that “the Practitioner Research movement is thriving worldwide and it is pushing back against constraints” (p. 7). We can expect that it will continue to grow because

research by teachers represents a distinctive way of knowing about teaching that will alter—not just add to—what we know in the field. (Cochran-Smith & Lytle, 1993, p. 85)

## Key Terms

Action reflection model 264  
Action research 256  
Inquiry stance 256

Participatory action research 263  
Reflective practice 258  
Recursive process 263

Teacher research 255  
Triangulation 266

## Highlights

- Teacher researchers use a wide variety of approaches and data collection methods.
- The idea of teachers as reflective practitioners has a long history.
- Teacher research minimizes the gap between research and practice.
- Teacher research offers a unique way of creating knowledge about teaching.
- Action research is a cyclic, recursive, team-based research method.
- Educational action research projects are often aimed at whole-school change.

## Student Study Site

To assist in completing the web exercises, please access the study site at [www.sagepub.com/check](http://www.sagepub.com/check), where you will find the web exercise with accompanying links. You'll find other useful study

materials such as self-quizzes and e-flashcards for each chapter, along with a group of carefully selected articles from research journals that illustrate the major concepts and techniques.

## Discussion Questions

1. After reading this chapter, do you feel ready to do research in a classroom? If you were to try to follow the self-planning outline, what further reading would you need to do? What assistance would you need from an experienced researcher? Where could you find such assistance?
2. Do you know a teacher who has researched his or her own classroom or school? If you could talk to an experienced teacher researcher, what questions would you ask?

## Practice Exercises

1. Locate and read the complete chapter or article for one of the cases used in this chapter. Write a response/reaction describing, each in a short paragraph, two things you learned from the article, two things that surprised you about the article, and your one strongest “take-home” point from the article.
2. Using the planning outline, think about your own classroom (or an imaginary classroom if you do not yet have a classroom of your own) and do Items 2 and 3 on the outline. As the final step, write a brief reflection on answering the following questions: Was it harder than you thought? Are you happy with your research question? What did you learn by answering the questions?

## Web Exercises

1. Visit these three websites where teacher researchers report their work: Teacher and Action Research (<http://gse.gmu.edu/research/tr>), Networks: An On-line Journal for

Teacher Research (<http://journals.library.wisc.edu/index.php/networks>), and Teachers Network (<http://www.teachersnetwork.org/tnli/research>). Find at least one article on

each site that interests you and read it. How do these write-ups differ from articles in peer-reviewed academic journals that you are familiar with? Did you find the articles useful? How valid do you think the results reported are? Did the authors report any changes in themselves as teachers as a result of doing the research? Are the findings generalizable at all? What does your analysis tell you about the goals and processes of teacher research in comparison to traditional educational research?

2. Through your library, search the table of contents for the last 3 years of issues of these two journals: *Action Research* and *Educational Action Research*. What differences do you see in the types of articles they publish? Find one article from each journal that you are interested in, and look at it. What types of research methods were used in the research reported? Who were the members of the research team (teachers, community members, etc.)? What steps were taken to address ethical concerns?

## Developing a Research Proposal

Using Steps 1 to 5 of the Teacher Research Project outline, create a Teacher Research Proposal for investigating a question in your classroom or a classroom you have access to. Use the cases and examples in this chapter to help you with methods for data collection. Be sure to include measures for reflexivity and

triangulation, and identify an audience to which you will report your results. Be sure to include issues such as the following: What ethical concerns will you have to address? How long will the proposed project take?